

The Cellular Emergency Alert Systems association International
Reply to comments filed by Corr Wireless communications LLC.

In response to
FCC EB Docket Number 04-296

The Corr engineers were correct in addressing the pertinent technical issues that they have raised. Indeed their technical advisors would have been derelict in their duty if they had not mentioned the potentially disastrous consequences of embracing new service features without exercising proper caution.

CEASA international respectfully submits that in its decade of research into broadcast messaging for emergency alert and advisory applications, the issues raised have been foreseen and effectively addressed by the 'Airadigm Model' that we now able present. In this light, we would like to add the following remarks to those of Corr, in order to further the discussion and hopefully allay these perfectly valid concerns.

Corr's statement that "Neither cellular nor Wire line telephone networks are designed to accommodate simultaneous broadcasting of messages to the entire subscriber base", is not fully up to date. All 2nd and 3rd generation mobile systems have a feature known as 'Cell Broadcasting', which does provide simultaneous true broadcasting (not mass multicasting) to subscribers via their terminals.

The issue that "in Docket 04-35 the Commission recently calculated that wireless systems are designed to serve one-eighth of their subscriber pool at any one time" is not a seriously debilitating issue. 'Cell broadcast' reaches subscribers who are in idle mode, so seven-eighths of the subscriber base can be reached within about 20 seconds. The other one-eighth is reached when they hang up, because the message is repeated for a sufficient period of time to address the average call duration.

While it is true that "wired or wireless (communication) are primarily two-way point-to-point and intermittent" the statement that "Any deviation from that pattern would instantly cause the entire network to crash because it could not possibly handle the call volume", needs some revision. 'Cell Broadcasts' imposes no load at all on; the SMS centre, HLR, MSC, VLR, Paging channel, Control Channel or any traffic channel.

If you sent a SMS-CB message to every subscriber on a BSC at one time, the load on the system would be less that of a single voice call to single user. This is due to the fact that the set-up of a voice or SMS call results in several paging commands being sent to every cell in the MSC area (or at least the location area) multiplied by thousands of users. This is why an SMS based solution would indeed be the disaster that Corr fears. SMS-Cell broadcast however does not generate any paging load. BSCs are critical in paging load, and their paging load is not affected by Cell broadcast. SMS-CB messages also only

target the specific cells pertinent to the emergency at hand, which will normally be less than the total number of cells in the location area.

In the matter of "Considering the treatment of roamers" it is true that any user of the system sending the alert, who is roaming to say London for the day, does not need to be contacted, but anyone from London who is roaming to the Corr system will need to be contacted. However since Cell broadcasting makes no call upon the roaming system, or any aspect of the mobility management system at all, whether a subscriber is roaming in or out of network is completely immaterial. The user being in the cell and his roaming status makes no difference at all. Thus subscribers receive messages, which relate only to the geographic area in which they are currently located, regardless of where they come from. An American visiting London would be protected by warning messages from the British Authorities, or anywhere else that he would choose to roam. Traveller safety is thus greatly enhanced.

The statement that; "The cellular system would automatically try to track and locate them wherever they were. This would not only seriously overload the capacity of the network but would also create significant long distance charges" must be clarified. SMS-CB does not locate or track the target users, there is no international signalling involved and there are no costs to the subscriber or the network. Further, Cellular Broadcast SMS does not impact subscribers privacy by requiring disclosure user ID and locational information.

Regarding frequency hopping, 'Cell Broadcasting' has been implemented in many networks all over the world, all of which have frequency hopping enabled. We are unaware of any case where Cell Broadcasting was incompatible with Frequency Hopping. The statement that "the introduction of EAS would be incompatible with frequency hopping, the two features cannot co-exists" does not match the C-B SMS experience anywhere in the world.

Further, SDCCH/TCH grading issues can be better addressed by the use of features such as 'Immediate Assignment' and 'Dynamic Channel allocation', which must, in any case, be implemented, to prevent SMS overload of SDCCH channels. Typically networks implementing such features to handle SMS and WAP load, find that CB makes almost no difference to congestion in most used cell configurations.

The story about the morning of 9/11 situation causing overload is well known, but the statement that "Had the local sprint PCS network been obligated to alert all of its subscribers to the disaster, the precious capacity would have drained even further at just the point when people were needing the capacity" may be seen in a different light. Cell Broadcasting uses no call set up or traffic channel capacity and is not impacted by, nor does it impact, capacity. Had Cellular-Broadcast SMS been available to emergency agencies, local government could have provided critical life saving information such as "the northwest stairway is passable", "do not go to the roof", "evacuate the building now" as well as well as offering reassuring communication of authorized instruction to millions of citizens without adversely impacting normal network operations.

I would agree with Corr that wireless communication is a very personal medium and that the fact that a mobile is carried by users everywhere they go, is a major point for wireless.

However the notion that the internet can perform this role better is clearly not very strong, as a user would have to have his computer booted up, not hibernating, with him and on line to benefit from EAS so delivered. The internet in its present form is not a personal communications media, as is the case for wireless devices. Eventually personal WiFi devices will emerge to challenge mobile, but CEASA has already foreseen this and will fully integrate such devices in to the EAS² programme. For the foreseeable future, mobile telecommunications represents the best and most immediate solution available.

CEASa respectfully suggest that all carriers seek to understand what is proposed with an open mind, so that they will see that the model CEASa has adopted is indeed very sound. The technology has already been endorsed by many principle mobile engineers in highly respected international networks, is network friendly, and will bring honour rather than failure to all who participate in the programme.

I personally entered this programme in order to prevent the exact threats that Corr has foreseen, and I commend Corr for noticing the potential problem and hope that their concerns may be allayed. I am most thankful for all of your kind consideration.

Mark Wood, Hon Sec CEASA-international.